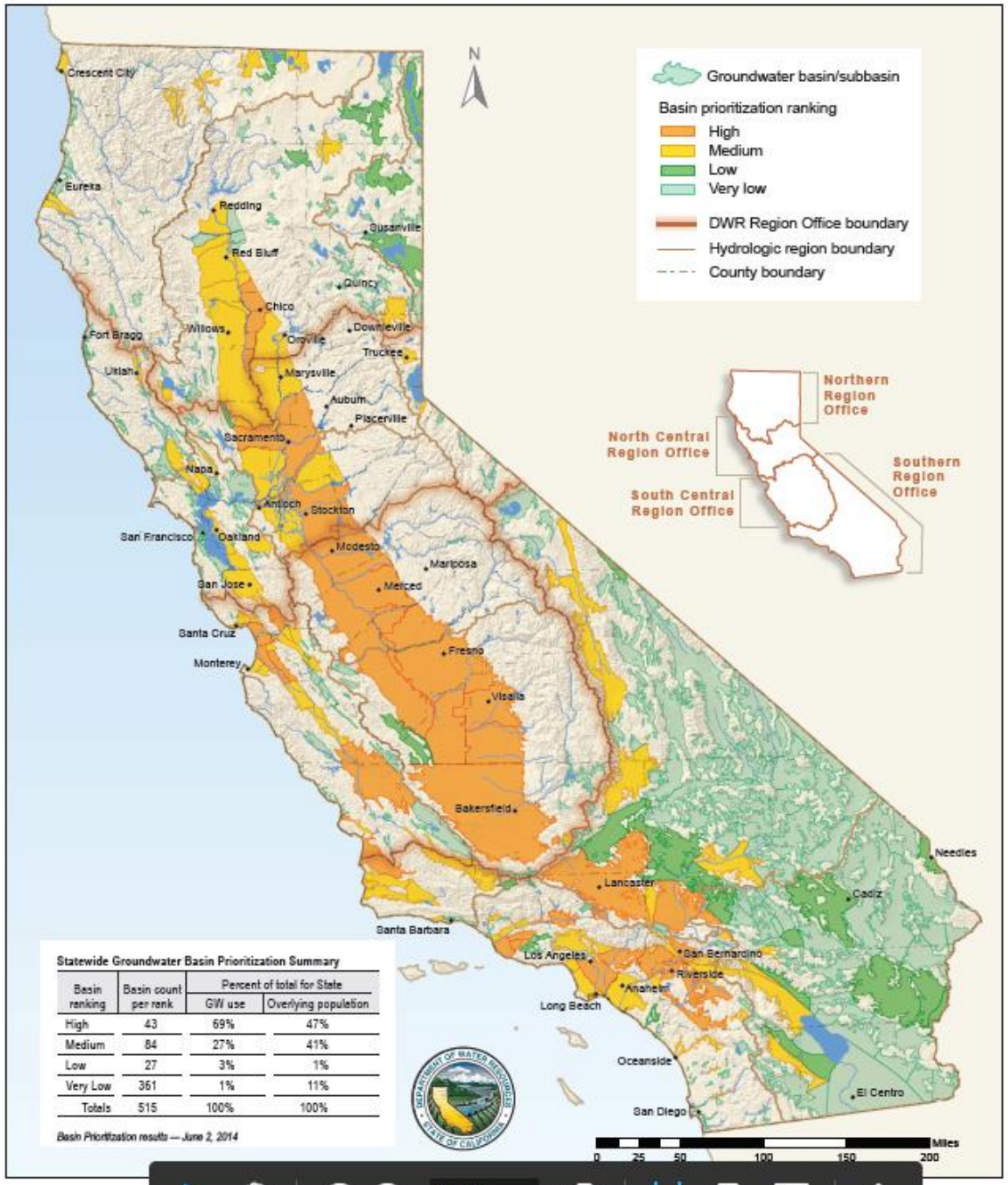
Butte County Approaches to SGMA

Water Education Foundation

October 22, 2015

CASGEM Groundwater Basin Prioritization

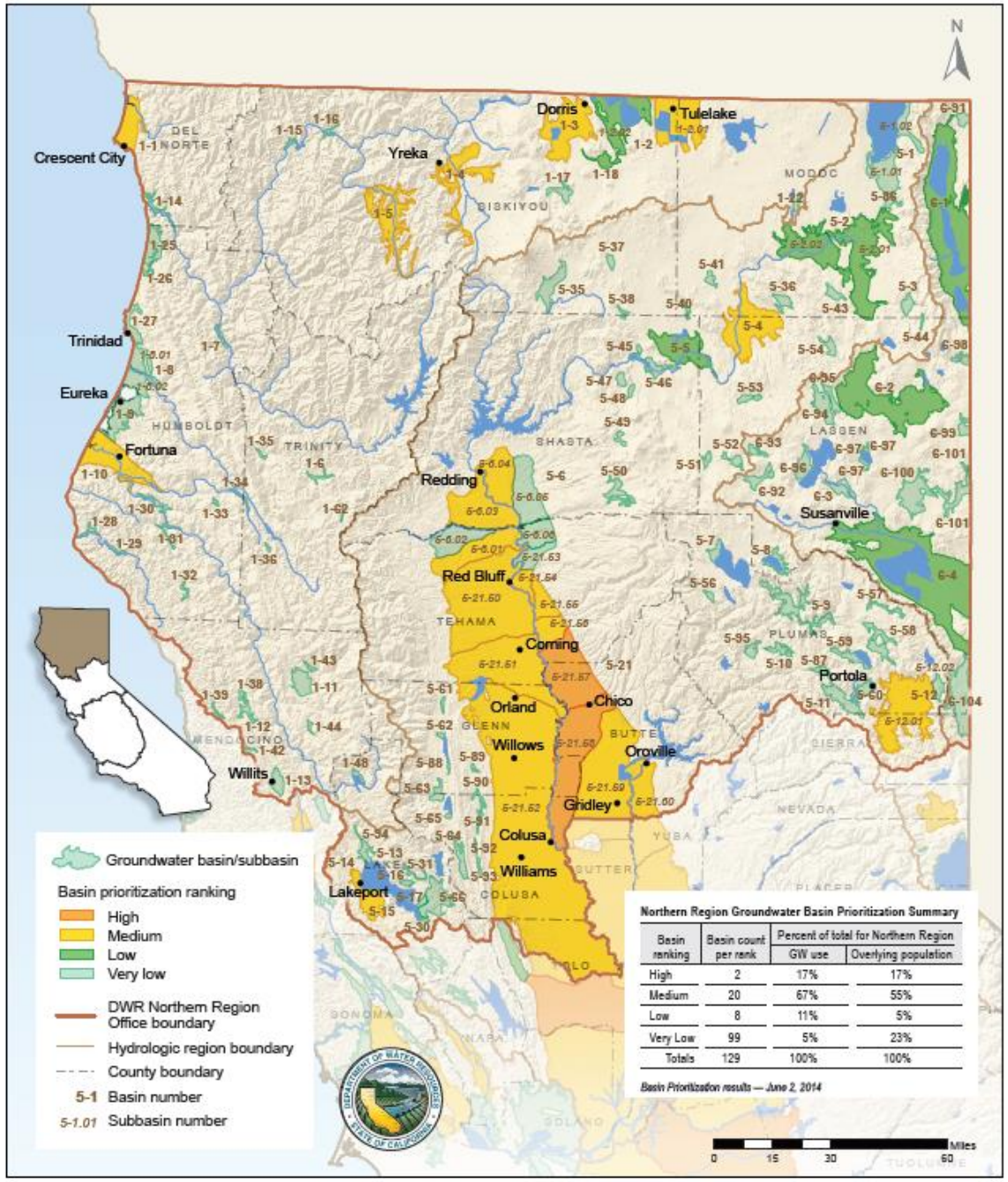


Statewide Groundwater Basin Prioritization Summary

Basin ranking	Basin count per rank	Percent of total for State	
		GW use	Overlying population
High	43	69%	47%
Medium	84	27%	41%
Low	27	3%	1%
Very Low	361	1%	11%
Totals	515	100%	100%

Basin Prioritization results — June 2, 2014

CASGEM Groundwater Basin Prioritization — Northern Region

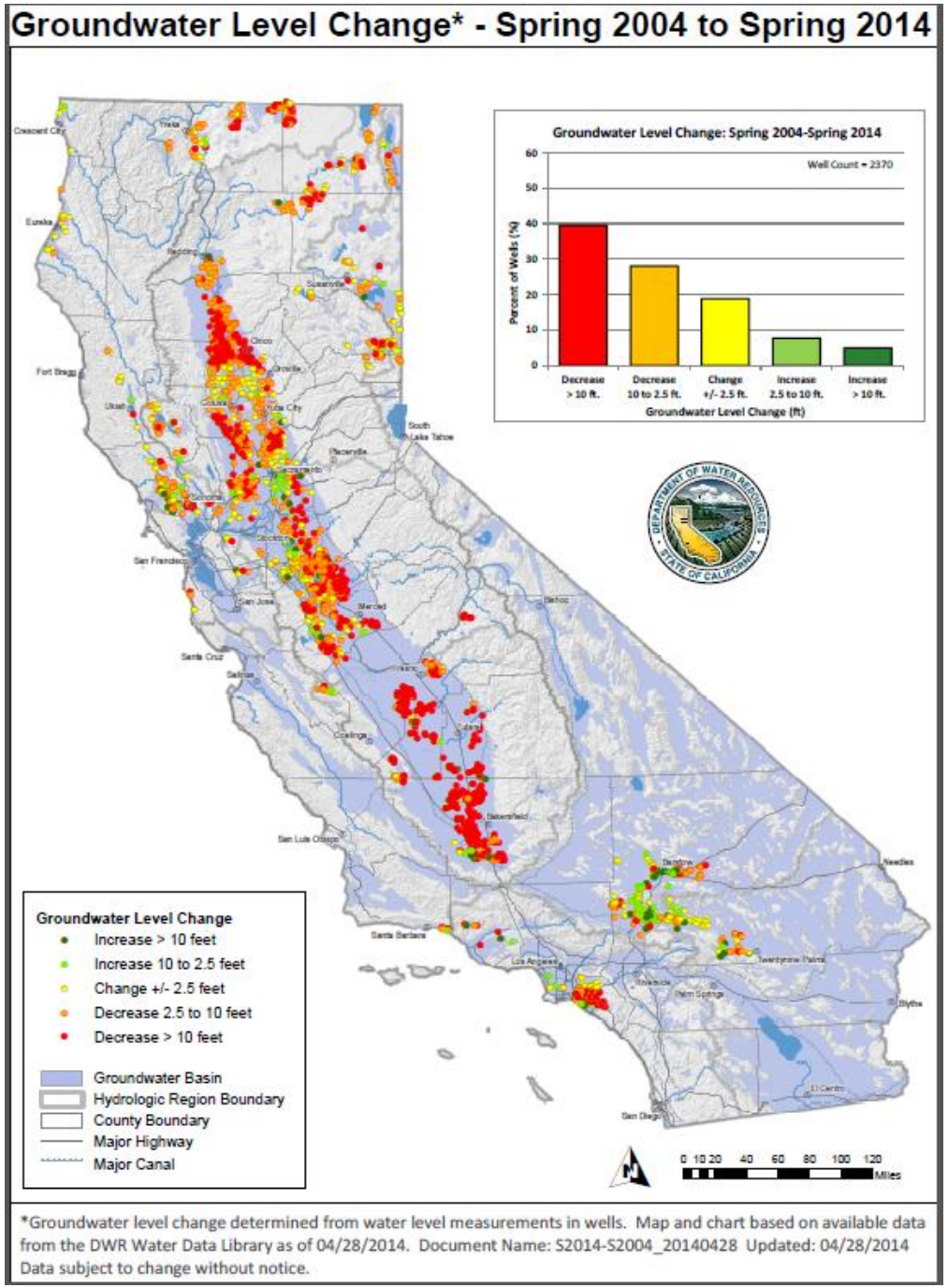


Northern Region Groundwater Basin Prioritization Summary

Basin ranking	Basin count per rank	Percent of total for Northern Region	
		GW use	Overlying population
High	2	17%	17%
Medium	20	67%	55%
Low	8	11%	5%
Very Low	99	5%	23%
Totals	129	100%	100%

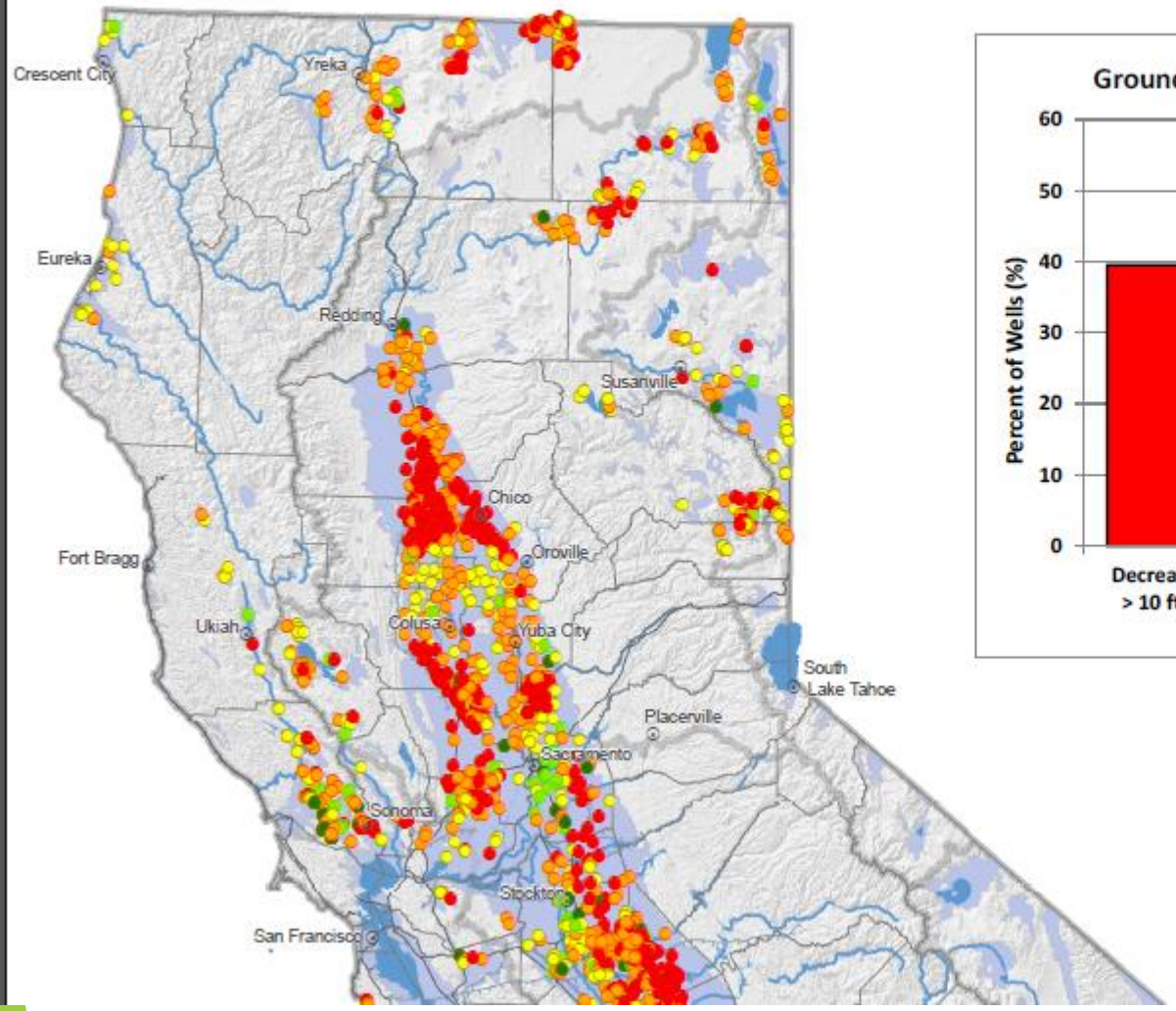
Basin Prioritization results — June 2, 2014

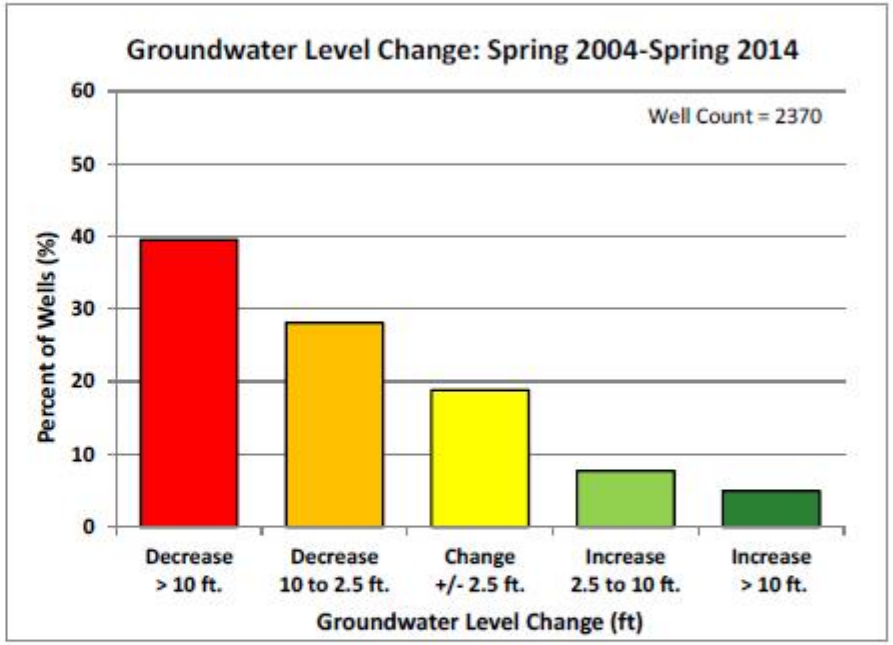
Groundwater Level Change* - Spring 2004 to Spring 2014



*Groundwater level change determined from water level measurements in wells. Map and chart based on available data from the DWR Water Data Library as of 04/28/2014. Document Name: S2014-S2004_20140428 Updated: 04/28/2014
Data subject to change without notice.

Groundwater Level Change* - Spring 2004 to Spring 2014



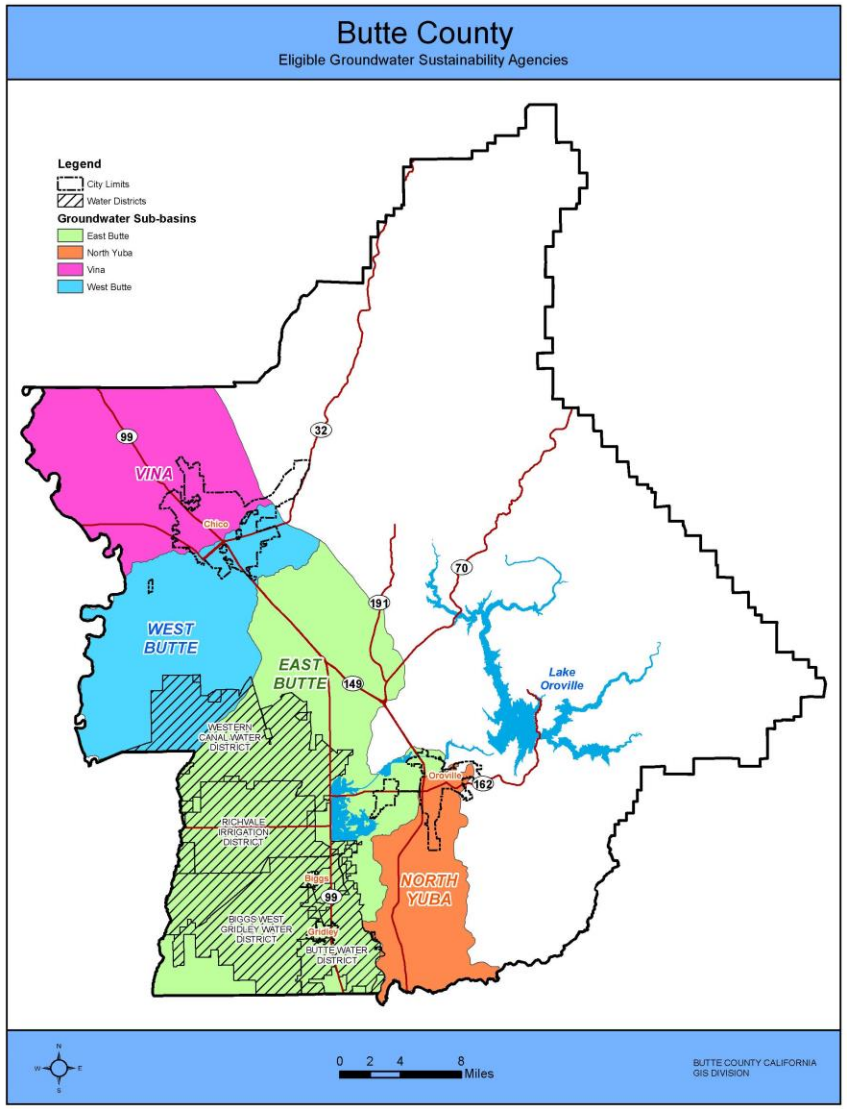


Formation of Groundwater Sustainability Agencies – Requirements:

- Land use authority
  - Counties
  - Cities
- Water management authority
  - Water and Irrigation Districts
  - Special Act Districts managing water

Entities Eligible to Become Groundwater Sustainability Agencies Within Butte County

- Counties - Butte
- Cities – Biggs, Gridley, Chico, Oroville
- Water or Irrigation Districts – Western Canal WD, Butte WD, Richvale ID, Biggs-West Gridley WD



Collaboration is Essential Between Water Management and Land Use Entities to Reach Sustainability of the Resource

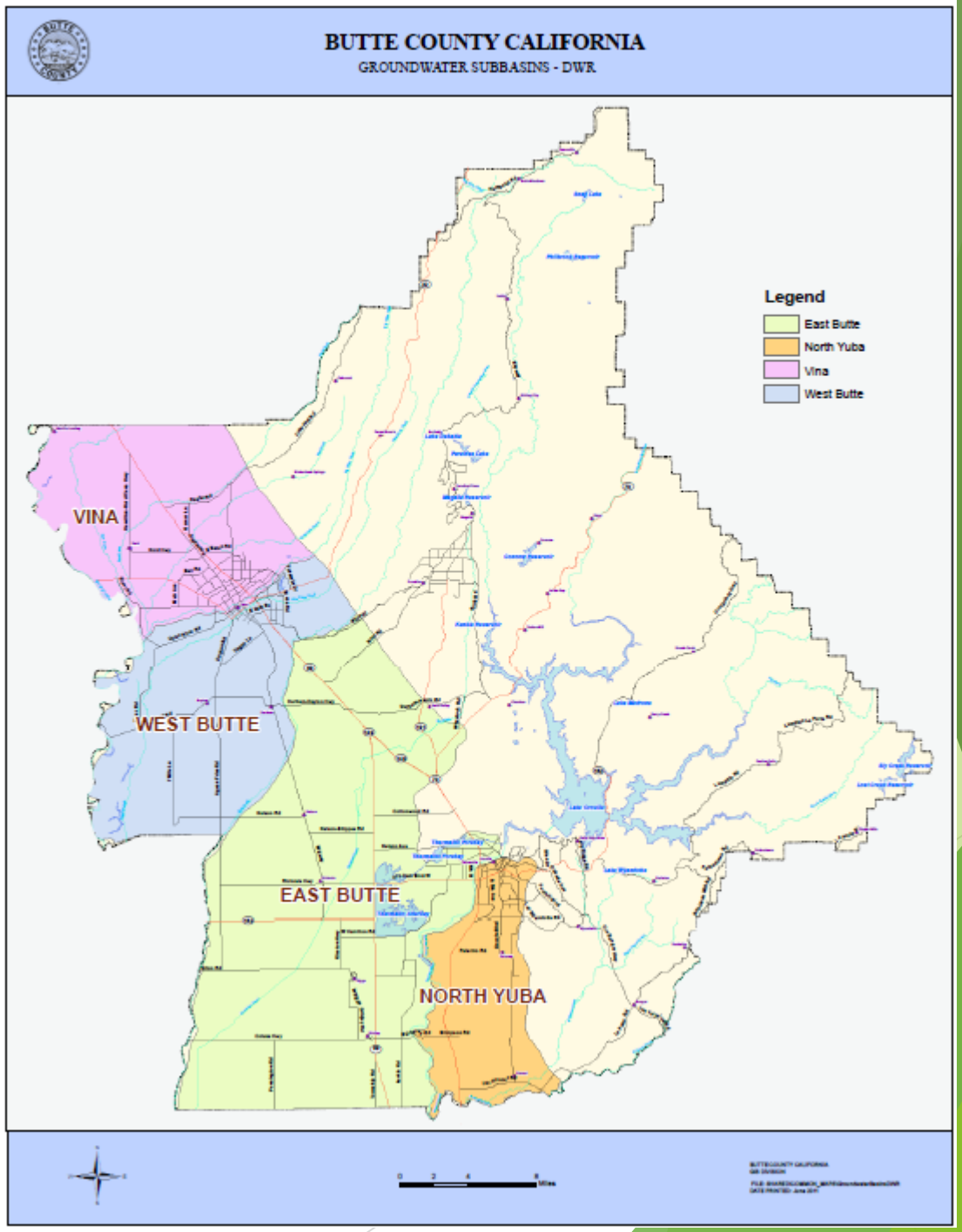
- Land use agencies (local governments)
- Water and Irrigation Districts
- Neighboring Counties
- Agricultural groundwater users
- Municipal water purveyors
- General public

Steps to Forming a GSA

- Identify your basins
- Identify local agencies and interests
- Understand the basin conditions
- Decide how to engage interested parties
- Determine assignment of authorities
- Decide best governance models

Butte County Groundwater Basins

- Vina
- West Butte
- East Butte
- North Yuba



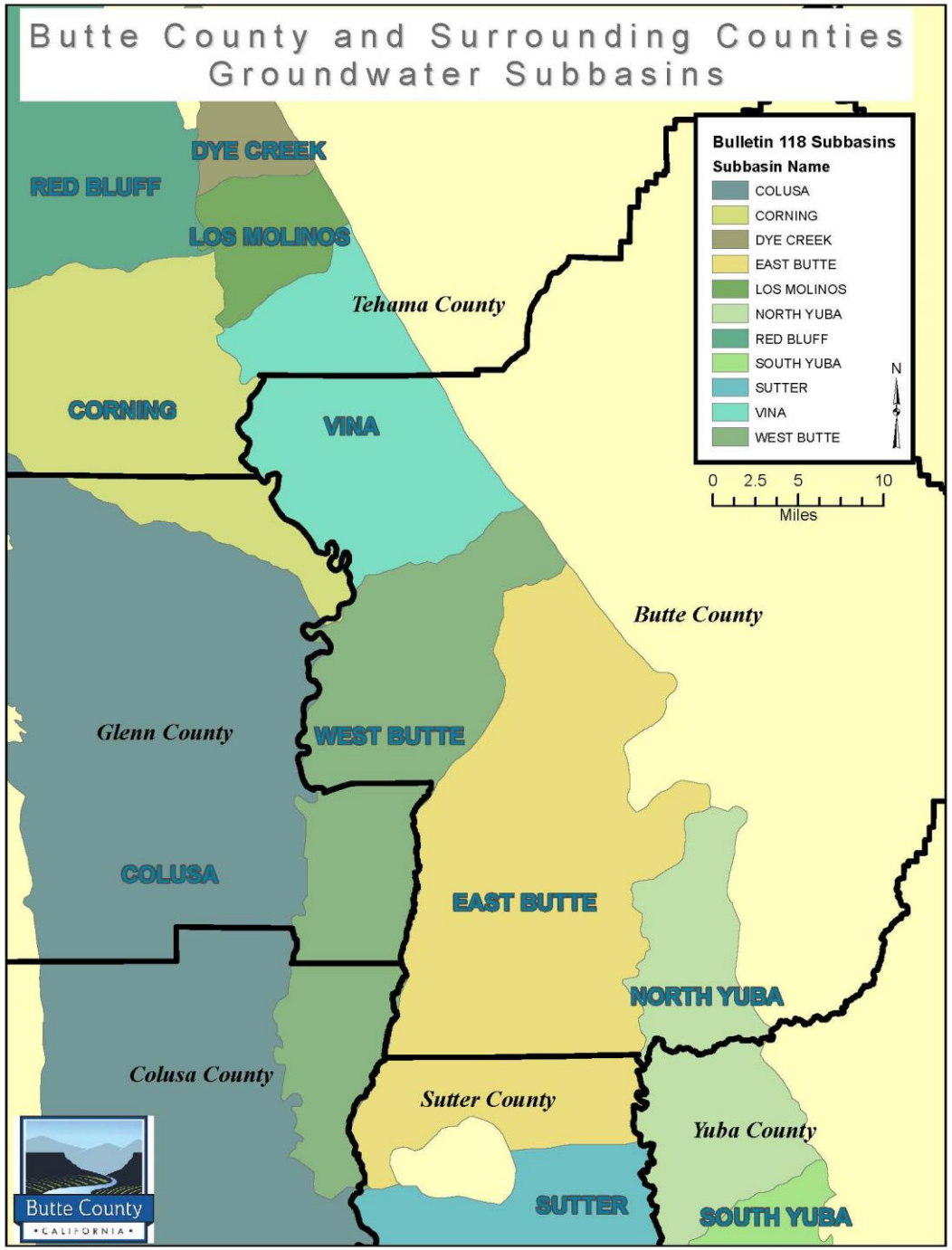
Groundwater Basins Within Butte County

Vina overlaps into Tehama County

West Butte overlaps into Glenn & Colusa

East Butte overlaps into Sutter County

North Yuba overlaps into Yuba County



Status Within Butte County of Entities that have Filed to Become a GSA

- Water Districts:
  - Biggs-West Gridley Water District
  - Butte Water District
  - Richvale Irrigation District
  - Western Canal Water District
- County of Butte: Board of Supervisors approved on October 13
- Outreach to Cities within the basin area of the county

Butte County Groundwater Sustainability Agency Assessment (GSA Assessment)

- Outreach to GSA eligible entities and other stakeholder groups
- Small group discussion/assessment of viewpoints
- Information assembled into Assessment Report
- Distribution to participating entities and the public
- Report out at public meeting to launch facilitated public process

Groups included in the Butte County Assessment

- Farm Bureau workgroup (groundwater, surface water or both)
- Vina area groundwater users workgroup
- Municipal water purveyors
- Internal county departments
- Surface water districts
- Neighboring counties
- Cities
- NGOs

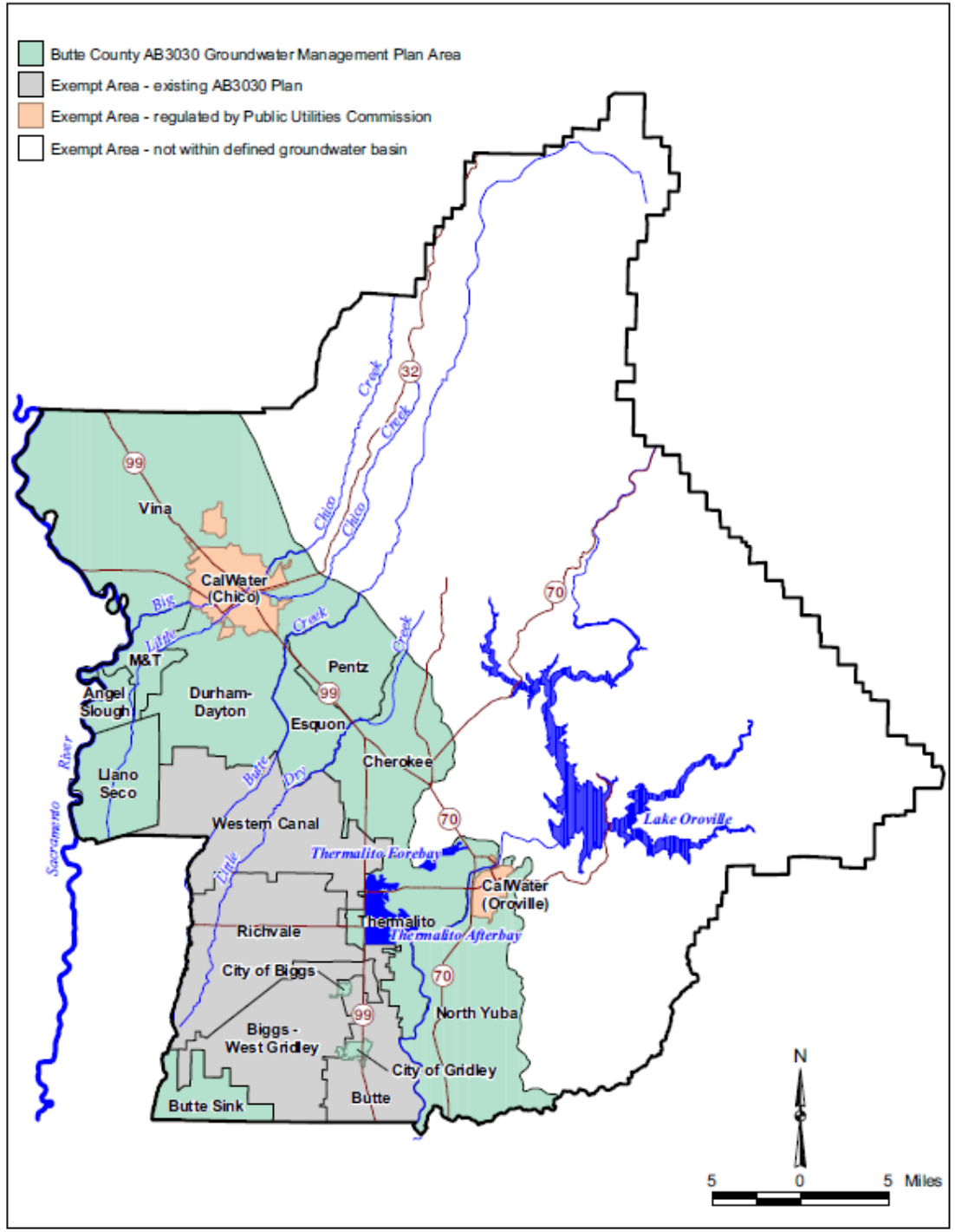
Butte County Groundwater Management Plans

Surface water districts

Butte County: non-district areas

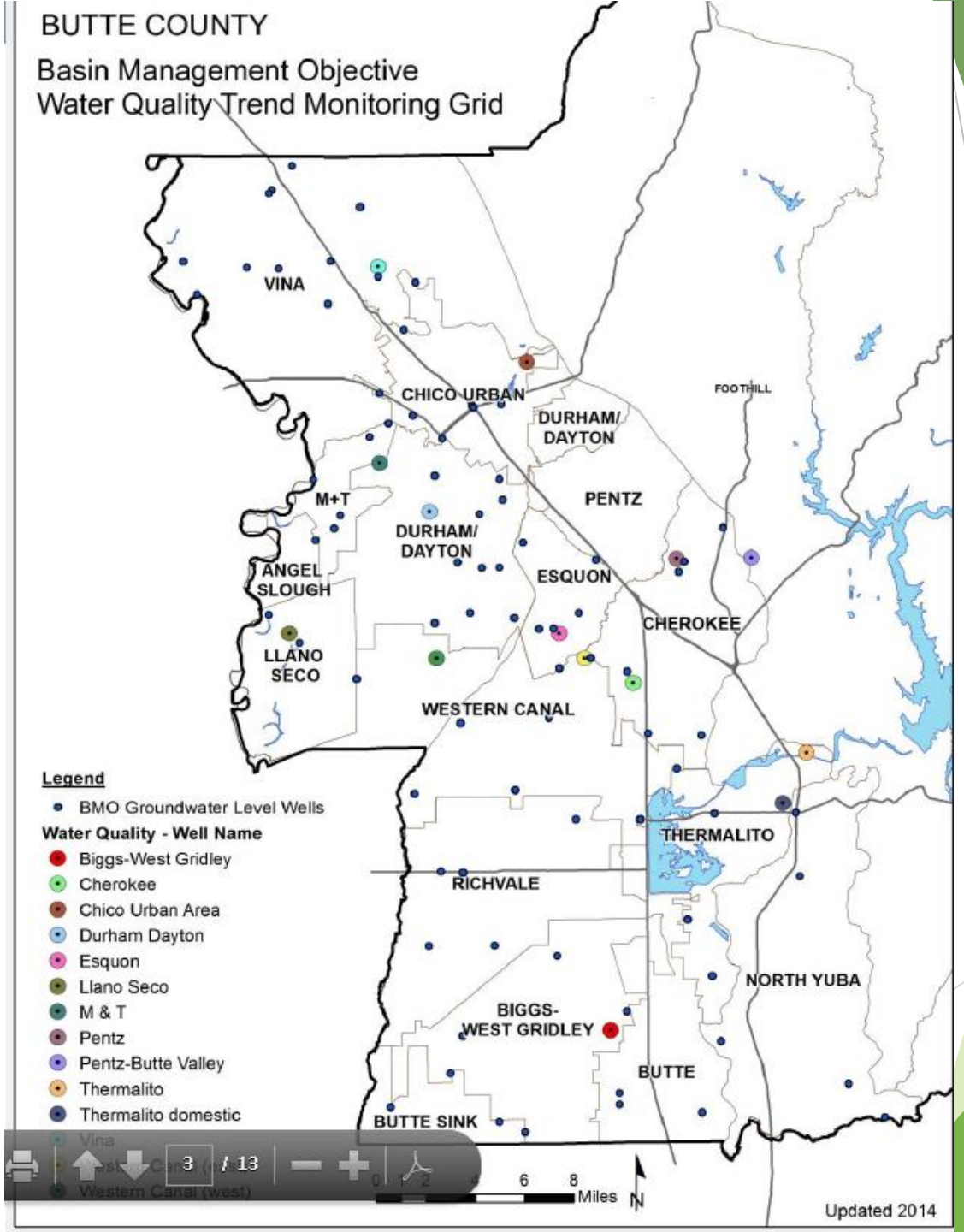
Exempt area: PUC regulated

Exempt area: non basin areas



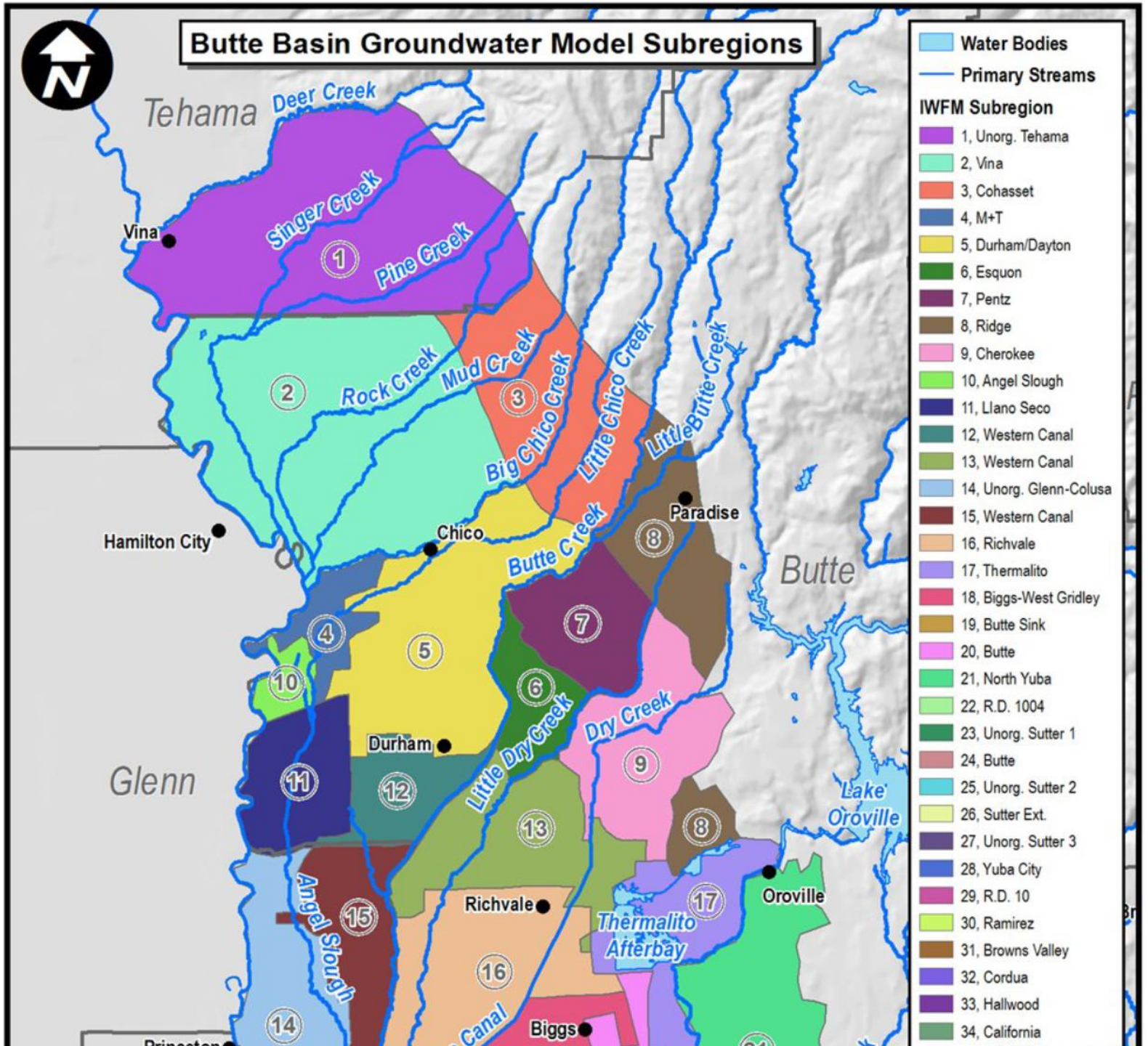
Butte County Groundwater Monitoring Activities

- Water Quality
- Water Levels
- Subsidence
- Annual Report



Extent of Groundwater Modeling Efforts

- Water Balance – inputs and outputs of groundwater usage
- Setting of sustainable groundwater levels
- Increased knowledge of resource to assist in management decision-making



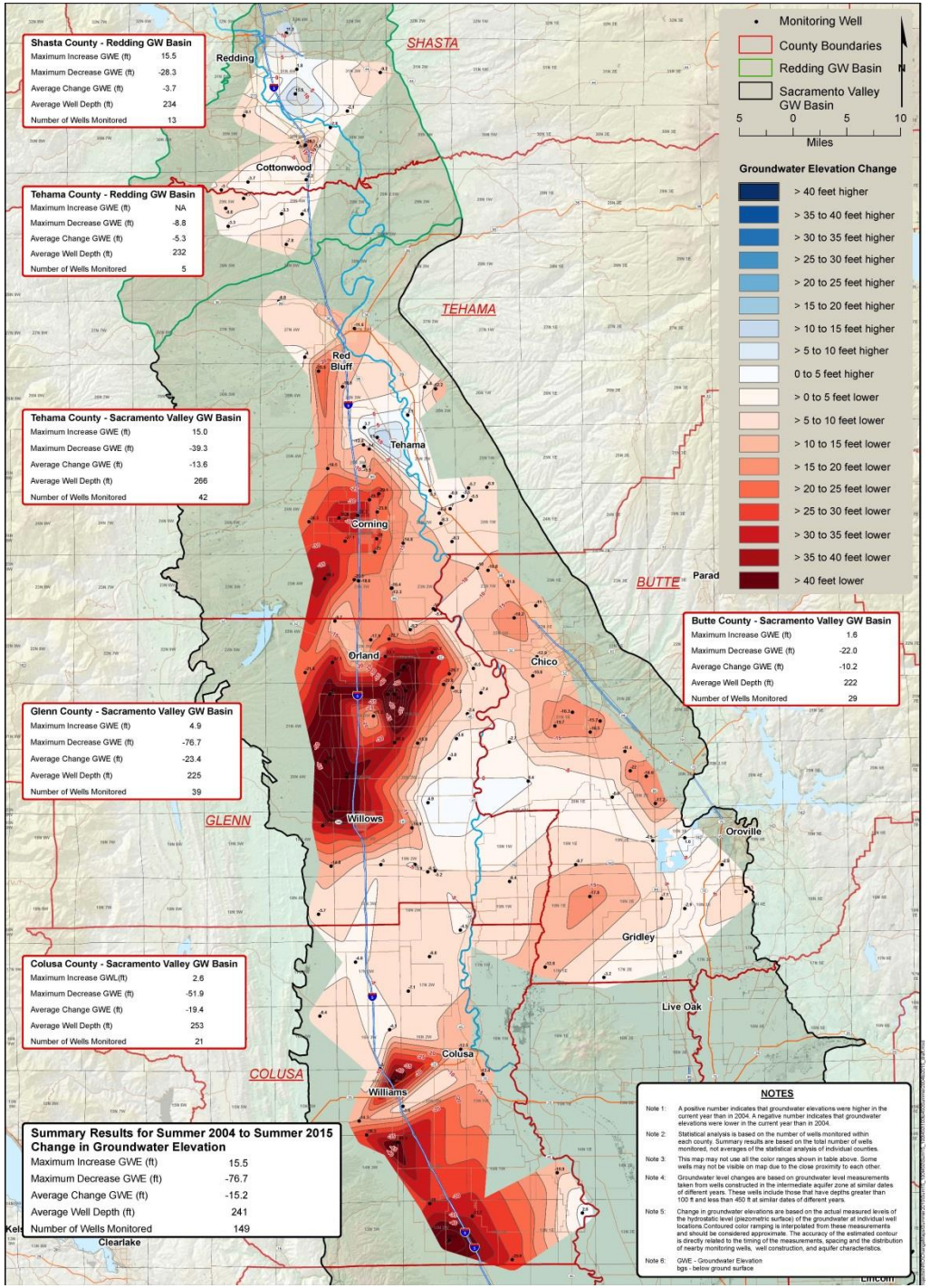
Challenges to SGMA Implementation within Butte County

- Large geographic area with varied interests
- Agriculture-based economy
- Aggressive environmental community
- Groundwater dependent areas for both agricultural and municipal uses
- Surface water districts with solid water rights supporting sustainable groundwater levels and recharge

Advantages to SGMA Implementation within Butte County

- Large geographic area with varied interests – **increased creativity in project development**
- Agriculture-based economy – **people are tied to the land for their livelihoods and lifestyles**
- Aggressive environmental community – **we all live here because of the environment**
- Groundwater dependent areas for both agricultural and municipal uses – **excellent potential for recharge and recycling projects**
- Surface water districts with solid water rights supporting sustainable groundwater levels and recharge – **opportunities to conjunctively manage excess surface water supplies to contribute to greater sustainability in the groundwater dependent areas of the basins**

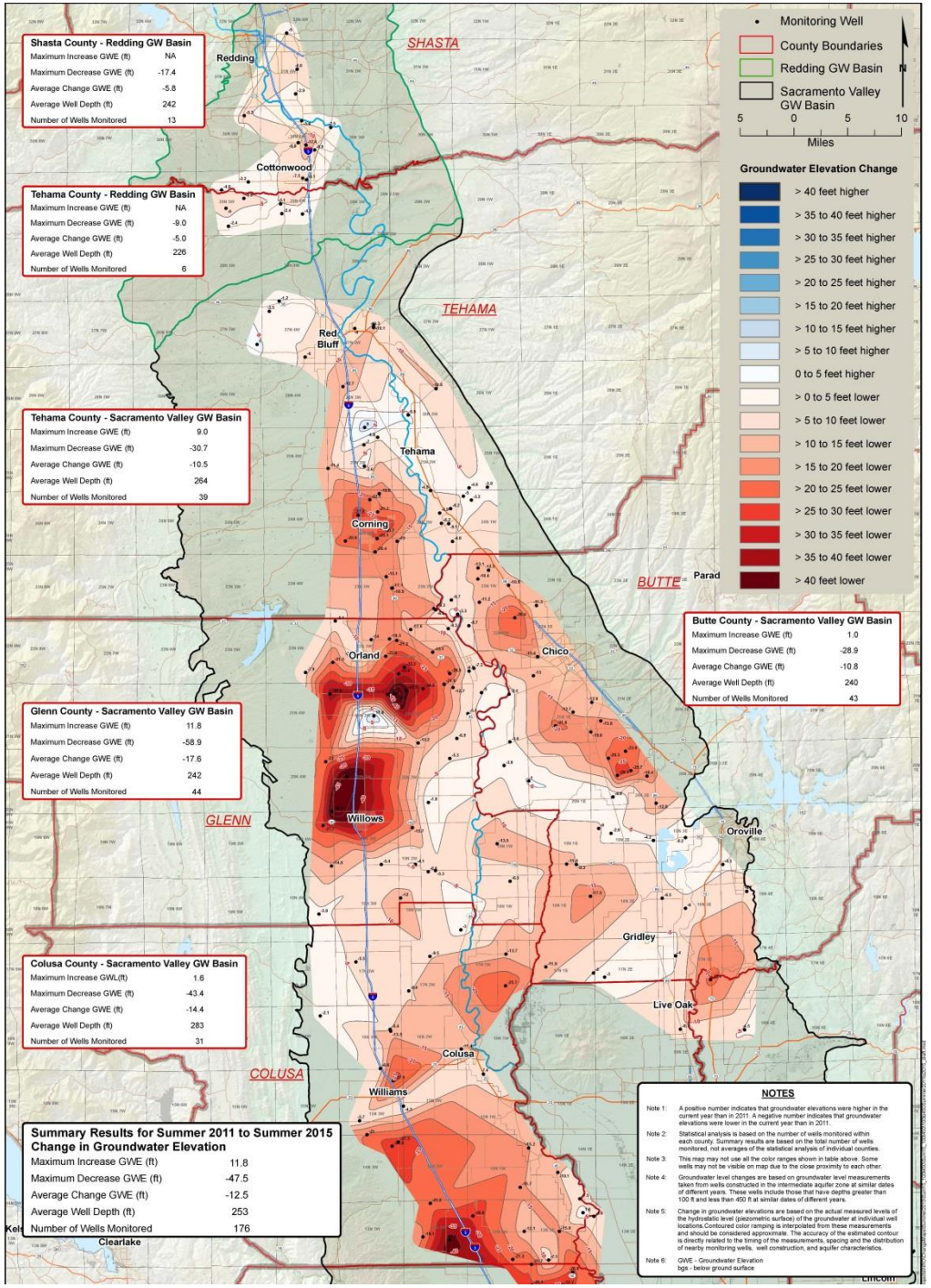
So what's the problem?



Wells 100-450 Feet Deep

Summer Change 2004-2015

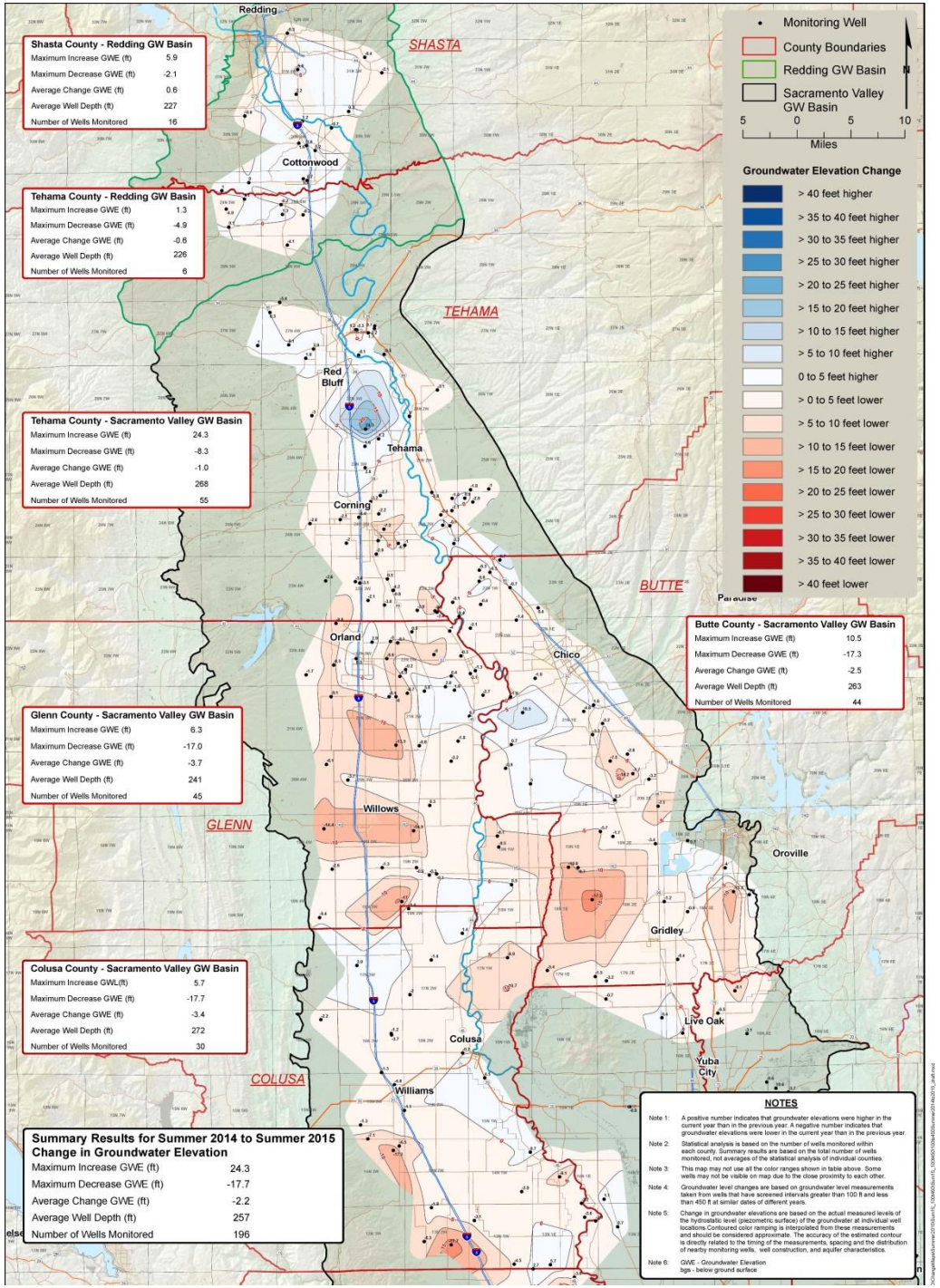
Summary Results for Summer 2004 to Summer 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	15.5
Maximum Decrease GWE (ft)	-76.7
Average Change GWE (ft)	-15.2
Average Well Depth (ft)	241
Number of Wells Monitored	149



Wells 100-450 Feet Deep

Summer Change 2011-2015

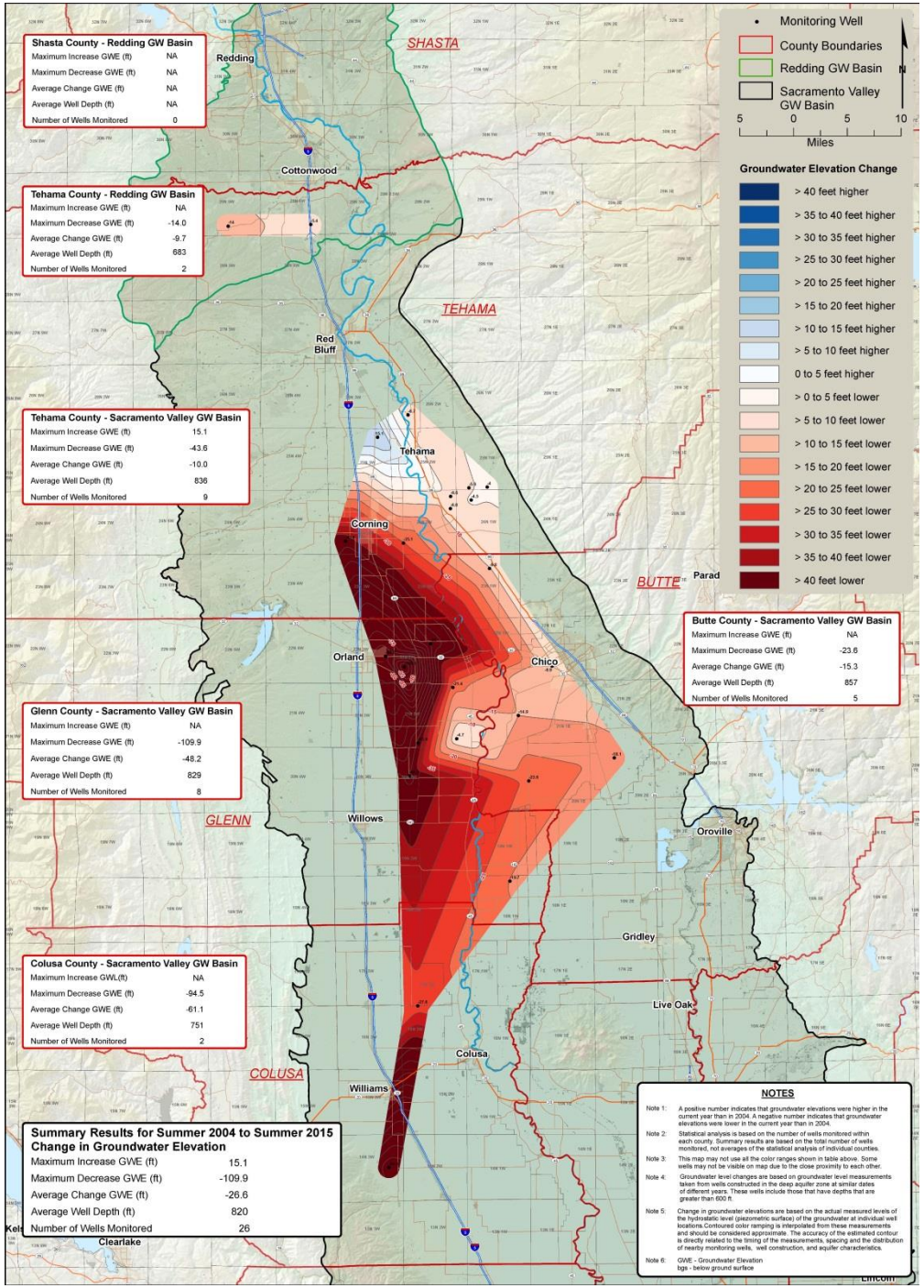
Summary Results for Summer 2011 to Summer 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	11.8
Maximum Decrease GWE (ft)	-47.5
Average Change GWE (ft)	-12.5
Average Well Depth (ft)	253
Number of Wells Monitored	176



Wells 100-450 Feet Deep

Summer Change 2014-2015

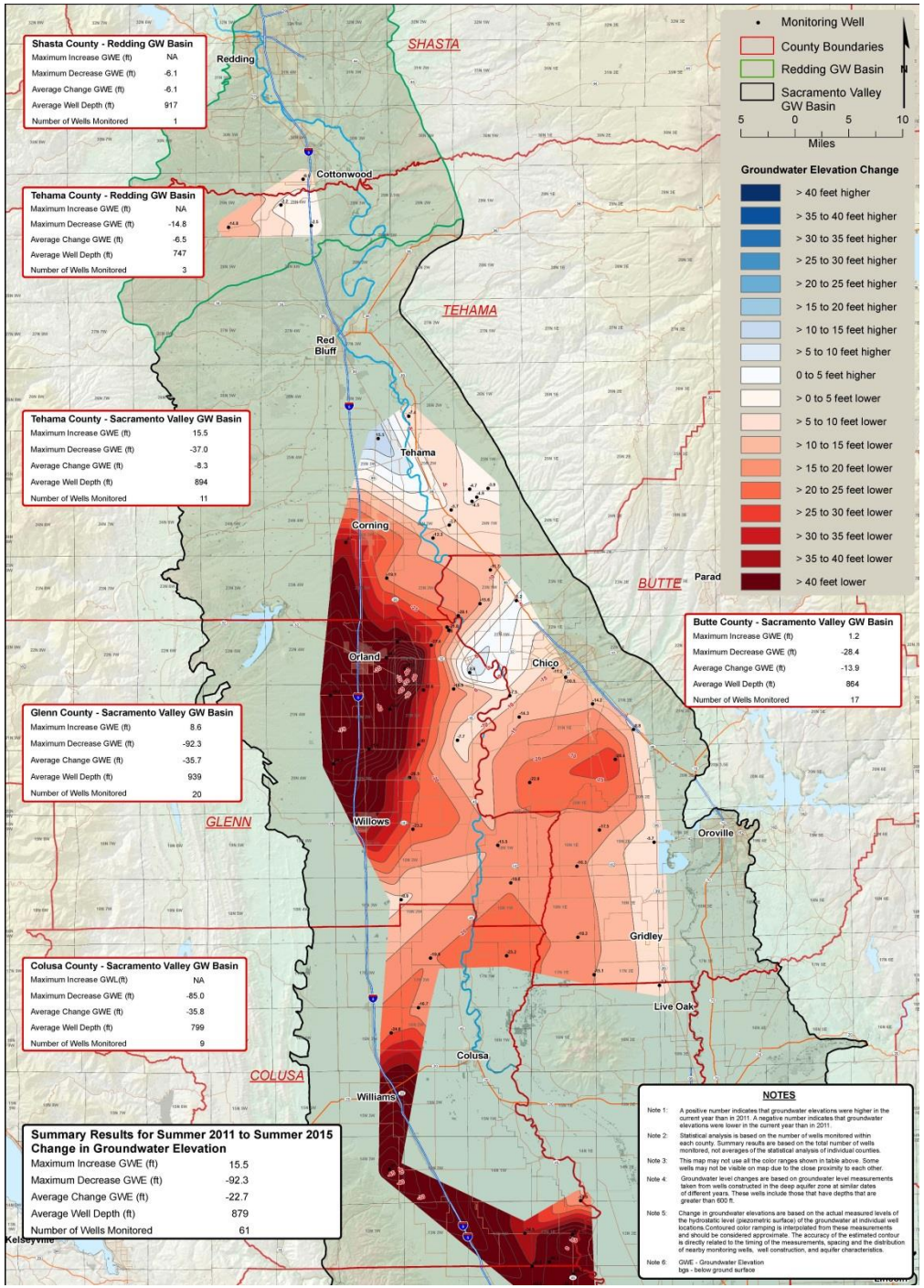
Summary Results for Summer 2014 to Summer 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	24.3
Maximum Decrease GWE (ft)	-17.7
Average Change GWE (ft)	-2.2
Average Well Depth (ft)	257
Number of Wells Monitored	196



Wells >600 Feet Deep

Summer Change 2004-2015

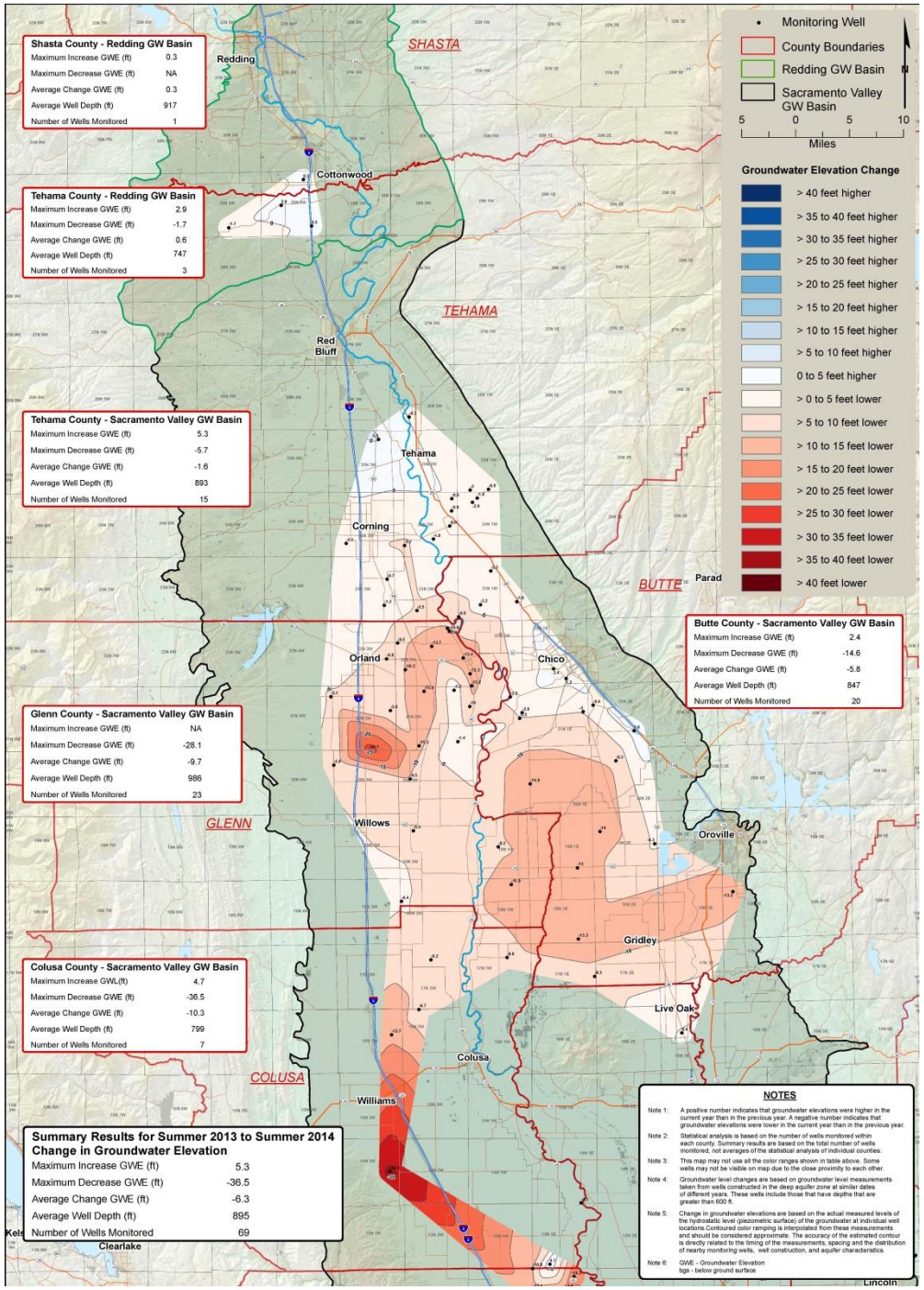
Summary Results for Summer 2004 to Summer 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	15.1
Maximum Decrease GWE (ft)	-109.9
Average Change GWE (ft)	-26.6
Average Well Depth (ft)	820
Number of Wells Monitored	26



Wells >600 Feet Deep

Summer Change 2011-2015

Summary Results for Summer 2011 to Summer 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	15.5
Maximum Decrease GWE (ft)	-92.3
Average Change GWE (ft)	-22.7
Average Well Depth (ft)	879
Number of Wells Monitored	61



Wells >600 Feet Deep

Summer Change 2014-2015

Summary Results for Summer 2013 to Summer 2014 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	5.3
Maximum Decrease GWE (ft)	-36.5
Average Change GWE (ft)	-6.3
Average Well Depth (ft)	895
Number of Wells Monitored	69

We need to **start the conversation in earnest** with everyone realizing they have may have to compromise, but they also may have something to gain…sustainability of the resource for all water users within the basins

Questions

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